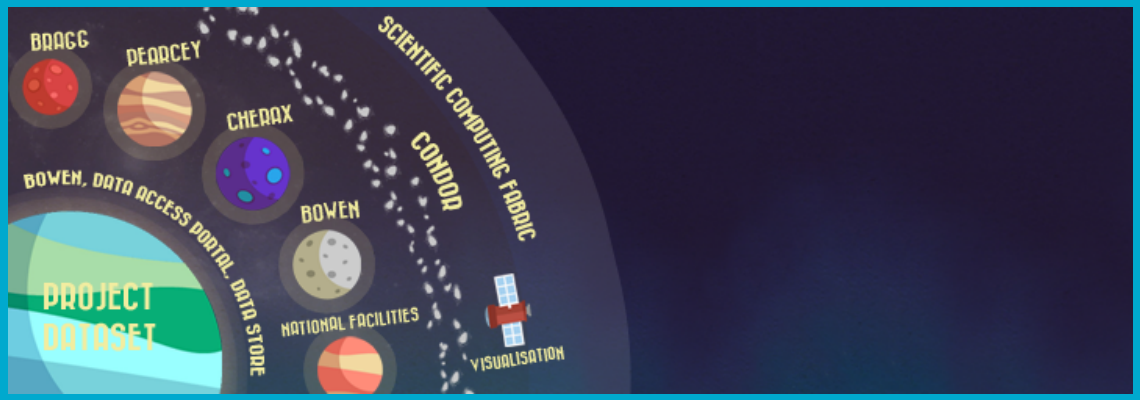


CSIRO Computing Swings out of the Sixties

Robert Bell, CSIRO

17 March 2020 – C3DIS

Outline

- CSIRO Computing History: Recap of the sixties
- Themes:
  1. The start of on-line data (slide 9-)
  2. The start of the on-line network (slide 22-)
  3. The Cyber 76 (slide 46-)
  4. Printing and microfiche (slide 53-)
  5. The growth of the service (slide 56-)
  6. The policy framework (slide 58-)
  7. The lessons (slide 59-)
  8. Trends (slide 60-)
  9. The end (slide 62)

CSIRO Computing History

- CSIR Mk 1 – 1949: Trevor Pearcey, Maston Beard – world's 4th (?) stored program electronic digital computer -> CSIRAC at Uni Melb
- Early 1960s
  - Trevor Pearcey and E. A. Cornish at DMS proposed a *C.S.I.R.O. Computing Network*
  - Approval by CSIRO Executive
  - £3 million grant (about $87M in 2018 values) from Commonwealth Government

History: CSIRO's Computing Services

- C.S.I.R.O. Computing Research Section
  - 1 January 1963 in Canberra
  - Dr Godfrey Lance appointed as OIC
  - Geoff Hill, Trevor Pearcey, Terry Holden and others joined
- New building (demolished in 2019)

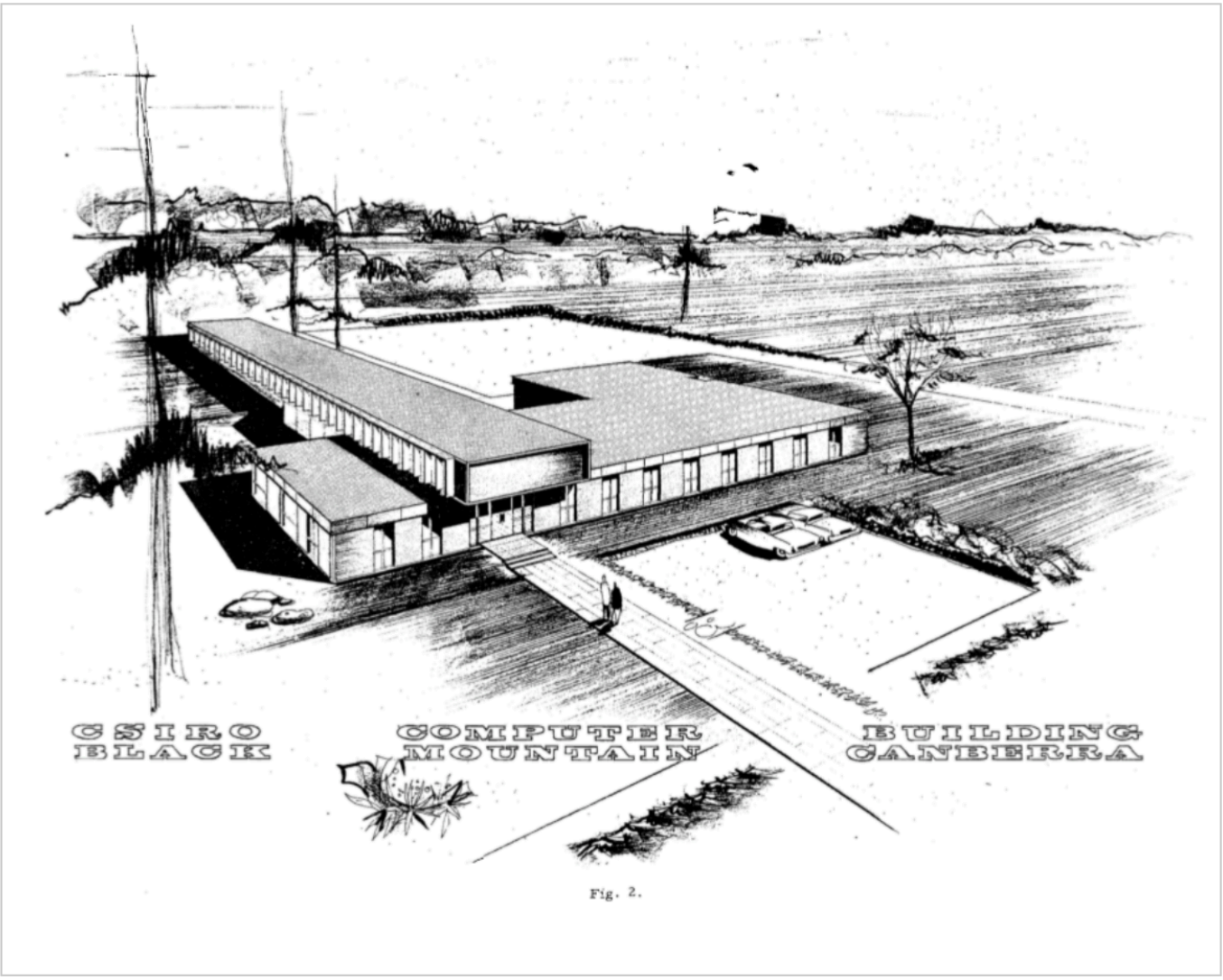
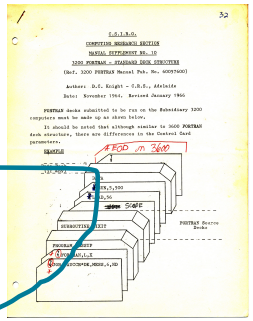


Fig. 2.

CSIRONET

History: CSIRO's Computing Services

- Tenders for supply of equipment:
  - CDC 3600 in Canberra
  - Satellite CDC 3200 systems in 3 state capitals ('paper' machines – E. T. Robinson's account)
  - Remote batch processing – cards and printouts – couriers and air-freight of magnetic tapes - jobstack

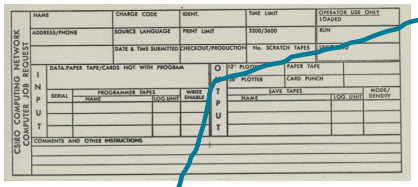


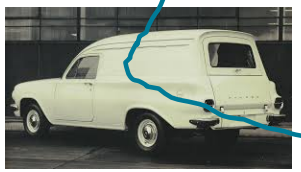
C.S.I.R.O.
COMPUTING RESEARCH SECTION
MANUAL SUPPLEMENT NO. 10
3200 FORTRAN - STANDARD DECK STRUCTURE
(Ref. 3200 FORTRAN Manual Pub. No. 60057400)

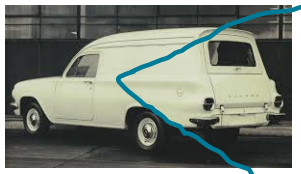
Author: D.C. Knight - C.S.I.R., Adelaide
Date: November 1964. Revised January 1966

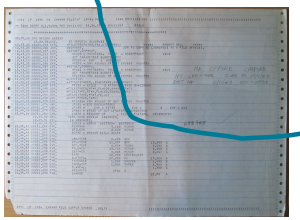
FORTRAN decks submitted to be run on the Subsidiary 3200 computers must be made up as shown below.

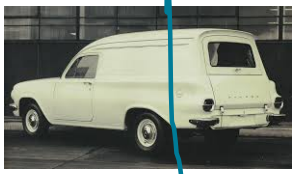
It should be noted that although similar to 3600 FORTRAN decks structure, there are differences in the Control Card parameters.

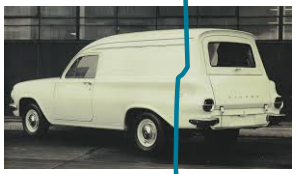






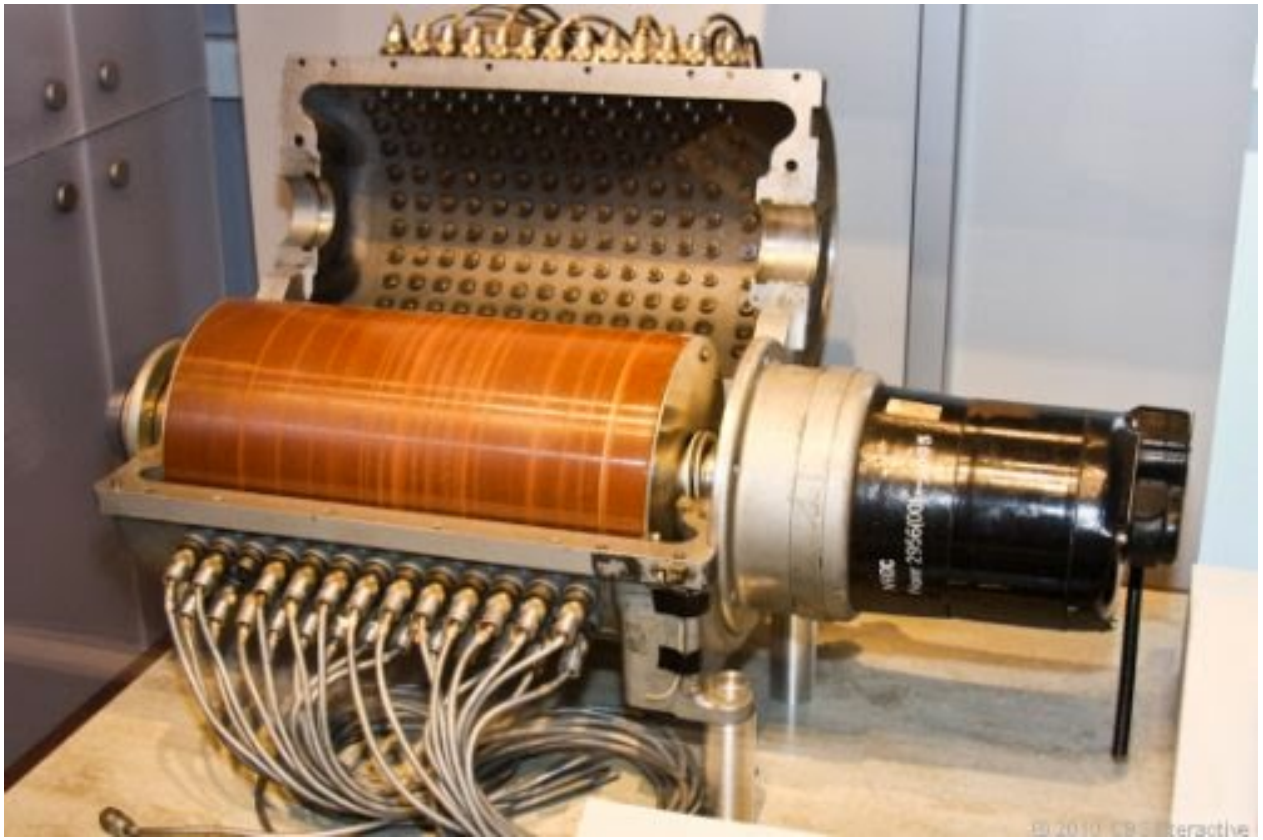






History: CSIRO's Computing Services

- Critical issues – systems did one task at a time
  - For example: no overlap of card reading with computation, nor printing with computation
  - Only magnetic tape for working storage – compilers were on tape, wrote binary code to tape, then loaders had to read tapes to load programs
- 1966: DAD Operating system – Drums And Display
  - Written by CSIRO and CDA staff
  - Overlapping operations
  - Document Region
  - On-line system – interactive document management, editing, INTERP, visualisation.

Example Magnetic Drum

http://forpresentation12.blogspot.com/2015/01/magnetic-drum.html